

SWBAT: make and measure standing waves

Jan 4-7:20 AM

Concept Sheet

~ 7 rows when we're done...

We'll fill in two terms (rows) today.

Concept	Meaning	Sym-bol	Units	Picture
FREQUENCY	HOW MANY PER UNIT OF TIME $\text{FREQ} = \frac{\#}{\text{TIME}}$	f $f = \frac{1}{T}$	hertz $\text{Hz} = \frac{1}{\text{sec}}$	
PERIOD	HOW MUCH TIME FOR ONE PERIOD $\text{PERIOD} = \frac{\text{TIME}}{\#}$	T $T = \frac{1}{f}$	seconds sec.	
TRANSVERSE	WHEN THE MEDIUM VIBRATES ACROSS THE DIRECTION THE WAVE TRAVELS.			
LONGITUDINAL	WHEN THE MEDIUM VIBRATES ALONG THE DIRECTION THE WAVE TRAVELS.			
AMPLITUDE	HOW FAR FROM THE MIDDLE.	A	meters m	
WAVELENGTH	HOW FAR FOR ONE "BACK & FORTH"	lambda λ	meters m	
WAVE SPEED	DISTANCE OF A WAVE TIME OF A WAVE	v	meters second m/s	

Feb 18-6:50 AM

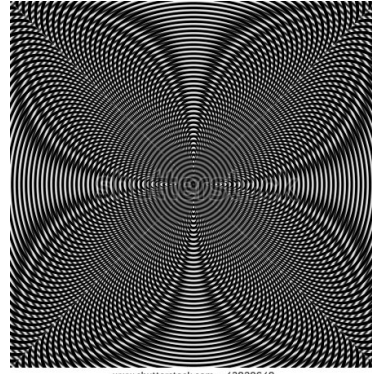
Welcome!!!

H. Leslie Grebe

* Pick up:

- blue concept sheet
- slip of paper (for later)

SECA Physics
Wednesday 16 April 2014



Opening Questions:

Centering

Where do we see waves run into each other in real life?

http://www.youtube.com/watch?v=J_xd9hUZ2AY

<http://www.youtube.com/watch?v=c3074eM5AeY>

<http://www.youtube.com/watch?v=k1HdUj6mAg>

Sep 7-7:04 AM

Standing Waves:

= a wave that **appears** to stay in one place.

Caused by interference.

Points that remain still are called **NODES**.

NO MOTION

<https://www.youtube.com/watch?v=ynqzeIYA7lw>

<https://www.youtube.com/watch?v=EhnbhOoPIBc>

<https://www.youtube.com/watch?v=gpCquUWqaYw>

RUBEN'S TUBE:
VISUAL REPRESENTATION
OF SOUND WAVES

Apr 21-7:45 AM

What could we measure???

frequency

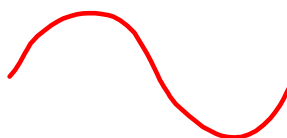
↓
PERIOD

WAVELENGTH

↳ FOR 2 BUMPS

AMPLITUDE

$$\text{WAVE SPEED} = \lambda / T$$



Feb 5-7:41 AM

Daily 3 Questions

CP: Standing Wave worksheet due Wed

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

Your can't get your points if you don't have your NAME!!!

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) A _____ is a wave that appears to stay still.

- ☒ A) Standing Wave
- ☐ B) Wavelength
- ☐ C) Moire Pattern

2) The units for measuring Wave Speed are

- ☐ A) seconds
- ☐ B) meters
- ☒ C) meters per second

3) The Ruebens tube (pipe with flames) provides a way to look at SOUND waves.

STANDING

Apr 15-7:43 AM